CLAIMS

What is desired to be covered by Letters Patent is as follows:

1. A wheel mechanism for use on ski-equipped vehicles such as snowmobiles comprising:

a) a first pivot unit which is adapted to be fixedly secured to a snowmobile having a front end and a rear end with a drive mechanism located in the rear end of the snowmobile and ground-engaging ski runner elements on the front end of the snowmobile, said first pivot unit being located near the front end of the snowmobile;

b) a steering yoke that is adapted to be operatively connected to a steering system on the snowmobile;

c) a strut having a proximal end pivotally secured to said first pivot unit and which is operatively connected to said steering yoke and a distal end;

d) a connection element on said strut near the distal end of said strut;

e) a second pivot unit which is adapted to be fixedly secured to the snowmobile adjacent to said first pivot unit;

f) a hydraulic unit which includes

(1) a housing having a proximal end connected to said second pivot unit and a distal end,

(2) a hydraulic ram telescopingly accommodated in the housing of said hydraulic unit to move into and out of the hydraulic housing, the hydraulic ram having a distal end,

(3) a third pivot connection on said strut, the distal end of the hydraulic ram of said hydraulic unit being pivotally connected to the third pivot connection, and

(4) a source of hydraulic fluid fluidically connected to the housing of said hydraulic unit and operatively connected to a control system on the snowmobile;

g) a ground-engaging wheel fixedly mounted on said strut at the distal end of said strut;

h) a shield having a proximal end pivotally mounted on the snowmobile adjacent to said first pivot unit and a distal end connected to the distal end of said strut; and

i) said strut and said hydraulic unit and said shield and said ground-engaging wheel all movable between a stored orientation with said ground-engaging wheel located adjacent to the snowmobile and a use

orientation with said ground-engaging wheel spaced apart from said snowmobile, said ground-engaging wheel supporting the front end of the snowmobile and elevating the ground-engaging runner elements off of the ground when said ground-engaging wheel is in the use orientation whereby the snowmobile is supported by said ground-engaging wheel and the drive mechanism of the snowmobile when said ground-engaging wheel is in the use orientation and the snowmobile is supported by the drive mechanism and the ground-engaging runner elements when the ground-engaging wheel is in the stored orientation.